



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/814,528 | 03/31/2004 | Tom E. Pearson | ITL.1105US (P18745) | 6903 |

21906 7590 01/24/2006

TROP PRUNER & HU, PC
8554 KATY FREEWAY
SUITE 100
HOUSTON, TX 77024

| |
|----------|
| EXAMINER |
|----------|

GIRARDI, VANESSA MARY

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2833

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/814,528

Applicant(s)

PEARSON ET AL.

Examiner

Vanessa Girardi

Art Unit

2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The previously held objections within pages 6 and 8 of the Specification have been overcome.

The previously held objections to claims 2, 13 and 14 have been overcome.

The Examiner agrees the amendments made to the Specification overcome the previously held objection of the Drawings whereby those originally submitted are acceptable.

Claim Rejections

2. Amendment of claims 2 and 13 does not place any of the claims in a condition for allowance therefore, claims 1-25 remain rejected on the grounds outlined in the previous office action of October 3, 2005.

Response to Applicant's Remarks

3. Applicant contends that Ciambrone's infrared soldering tool holds no value in teachings pertaining to the instant invention of a socket. The Examiner wishes to respectfully return to the Ciambrone reference (Col. 2, lines 10-13), quoted here for your convenience; "The present invention may be of benefit to any manufacturing process using infrared reflow soldering or leaded and combination chip and leaded components."

The instant invention is attempting to improve the process of surface mount techniques that rely on a surface mount oven which generates both convective heat and infrared radiation, which is well-known in the art as infrared reflow soldering.

4. To further substantiate the statement of this process being *well-known* in the art, the Examiner respectfully turns to Edwin et al. (US 5,262,594), cited and relied upon in the previous office action to reject claim 22 of the instant invention. The Edwin et al. reference was filed over 15 years ago. At that point in time, understanding of surface mount techniques employing

Art Unit: 2833

infrared reflow ovens was still being established, as evidenced by the detailed teachings throughout the Edwin et al. reference of the process, its pitfalls and desired outcomes. Turning specifically to (Col. 6, lines 8-17) particularly the statement that IR ovens produce 60% of the heat by natural convection energy and the remaining 40% is generated by infrared energy.

5. Further stated is the desire to minimize the amount of time required for passing the PCB through the oven in an attempt to offset potential damage to portions of the PCB not able to withstand such temperatures. This statement makes obvious the need for materials that are virtually invisible to infrared energy thereby facilitating the desired outcome of quickly and accurately applying 40% more of the heat generated by an IR oven as well as allowing for the quick dissipation of this heat once soldering of desired components is complete, thereby minimizing the potential of damage to heat-sensitive components.

6. In response to Applicant's remark that there is no suggestion to combine the references, the Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. *In re. Nomiya*, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. *In re Bozek*, 163 USPQ 545 (CCPA) 1969. As discussed above, these two references would suggest, to one versed in the art, an integrated socket component that would produce a more reliably soldered product overcoming some of the known pitfalls associated with reflow soldering techniques using an infrared oven.

Art Unit: 2833

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vanessa Girardi: Telephone number (571) 272-5924.

Monday – Thursday 7 a.m. - 5:30 p.m. (EST)

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on (571) 272-2800 ext 33.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VG
Art Unit 2833
January 18, 2006


THO D.TA
PRIMARY EXAMINER